<u>What is claimed is:</u>

1.   A method of identifying a test strip having a set of test pads, said method comprising:

        A.   impinging on said set of test pads at least one test signal having a wavelength;

        B.   detecting a set of reflected signals from said set of test pads;

        C.   generating an image comprised of a set of reflectance values derived from said set of reflected signals;

        D.   determining a test pad type from the image for at least one test pad from the set of test pads by comparing a reflectance value associated with the test pad with a set of reference reflectance values, wherein each of said reference reflectance values corresponds to said wavelength and is associated with a different reference test pad type; and

        E.   identifying said test strip as a function of a set of determined test pad types.

2.   The method of claim 1, wherein said at least one test signal is a test signal from an LED light source.

3.   The method of claim 1, wherein said at least one test signal is a plurality of test signals generated from a set of LEDs, wherein each LED in said set of LEDs is configured to transmit light at a different wavelength.

4.   The method of claim 1, wherein step C includes determining a test pad reflectance value for each test pad in said set of test pads.

5.   The method of claim 4, wherein step C includes counting said test pad reflectance values to determine a test pad count and determining a test strip format as a function of said test pad count.

6.   The method of claim 4, wherein step C includes determining a test pad order from said test pad reflectance values.

7.   The method of claim 6, wherein step D includes selecting said set of reference reflectance values as a function of a test pad position in said test pad order.

8.   The method of claim 1, wherein step B includes creating a pixel-based image of said test strip from said reflected signals.

9.   The method of claim 8, wherein said pixel-based image comprises a plurality of pixel sets and each pixel set corresponds to a different test pad.

10.   The method of claim 1, further including:
        F.   determining a test result for the at least one test pad as a function of the reflectance value.

11.   A method of identifying a test product having a test region, said method comprising:
        A.   impinging on said test region at least one test signal having a wavelength;
        B.   detecting a set of reflected signals from said test region with a matrix of pixel-based detectors and creating a pixel-based image of said test region, wherein said pixel-based image comprises a plurality of pixel sets and each pixel set corresponds to a different test area from said test region;
        C.   determining, from said pixel-based image, a reflectance value for at least one test area from said test region;
        D.   determining a test product type by comparing a reflectance value associated with the at least one test area with a set of reference reflectance values, wherein each of said reference reflectance values corresponds to said wavelength and is associated with a different reference test area type; and
        E.   identifying said test product as a function of a set of determined test area types.

12.   The method of claim 11, wherein the test product is a test strip and the test areas are test pads on the test strip.

13.   The method of claim 11, wherein the test product is a reagent cassette and the test areas include one or more of a test line, control line and reference in the test region.

14.   A system for identifying a test strip including a set of test pads, said system comprising:

    A.   media having data indicative of a plurality of reference test strips and of a set of spectral signatures, wherein each of said spectral signatures is associated with a reference test pad type and includes a reference reflectance value at each of a plurality of wavelengths;

    B.   a set of test signal generators configured to impinge on said set of test pads at least one test signal having a known wavelength;

    C.   a matrix of pixel-based detectors, configured to detect reflected signals from said set of test pads and to create a pixel-based image of said test strip, wherein said pixel-based image comprises a plurality of pixel sets and each pixel set corresponds to a different test pad on said test strip;

    D.   a translator configured to determine a reflectance value for at least one test pad from said set of test pads from the pixel based image;

    E.   a pad typing module configured to compare said reflectance value with a set of reference reflectance values from said set of spectral signatures for said wavelength to determine a test pad type; and

    F.   an identification module, configured to identify said test strip as a function of a set of test pad types determined by said pad typing module.

15.   A system for identifying a test strip including a set of test pads, said system comprising:

    A.   media having data indicative of a plurality of reference test strips and of a plurality of sets of reference reflectance values, wherein each set of reference reflectance values from said plurality of sets of reference

reflectance values is associated with a reference test pad type and a reference wavelengths;

B.   a set of test signal generators configured to impinge on said set of test pads at least one test signal having a known test wavelength;

C.   one or more detectors configured to generate an image of the test strip from the reflected signals;

D.   a translator configured to determine a reflectance value from said image for at least one test pad from said set of test pads;

E.   a pad typing module configured to compare said reflectance value with said sets of reference reflectance values for said test signal wavelength to determine a test pad type; and

F.   an identification module, configured to identify said test strip as a function of a set of test pad types determined by said pad typing module.

16.   The system of claim 15, wherein said at least one test signal is a test signal from an LED light source.

17.   The system of claim 16, wherein said at least one test signal is a plurality of test signals generated from a set of LEDs, wherein each LED in said set of LEDs is configured to transmit light at different a wavelength.

18.   The system of claim 15, wherein said translator is configured to determine a test pad reflectance value for each of said test pads.

19.   The system of claim 18, wherein said pad typing module is configured to determine a test pad count as a function of said test pad reflectance values and said pad typing module is further configured to determine a test strip format as a function of said test pad count.

20.   The system of claim 15, wherein said translator is configured to determine a test pad reflectance value for each of said test pads and said pad typing module is further configured to determine a test pad order as a function of said test pad reflectance values.

21.   The system of claim 20, wherein said pad typing module is further configured to apply a selected set of reference reflectance values as a function of a test pad position in said test pad order.

22.   The system of claim 15, wherein said detectors are configured to create a pixel-based image of said test strip from said reflected signals.

23.   The system of claim 22, wherein said pixel-based image comprises a plurality of pixel sets and each pixel set corresponds to a different test pad.

24.   The system of claim 15, further comprising:

      F.   a test conduct module, configured to determine a test result for the at least one test pad as a function of the reflectance value.

25.   A reflectometer for identifying a test strip including a set of test pads, said reflectometer comprising:

      A.   media having data indicative of a plurality of reference test strips and of a set of spectral signatures, wherein each of said spectral signatures is associated with a reference pad type and includes a reference reflectance value at each of a plurality of wavelengths;

      B.   a set of light emitting diodes (LEDs) configured to impinge on said set of test pads at least one test signal having a known wavelength;

      C.   one or more charge coupled device (CCD) detectors, configured to detect reflected signals from said set of test pads and to create a pixel-based image of said test strip, wherein said pixel-based image comprises a plurality of pixel sets and each pixel set corresponds to a different test pad on said test strip;

      D.   a translator configured to determine a reflectance value for at least one test pad from said set of test pads from the pixel-based image;

      E.   a pad typing module coupled to said one or more CCD detectors and configured to compare said reflectance value with a set of reference

reflectance values for said wavelength to determine a test pad type; and

F.   an identification module, configured to identify said test strip as a function of a set of pad types determined by said pad typing module.

26.   The system of claim 25, further comprising:

F.   a test conduct module, configured to determine a test result for said at least one test pad as a function of the reflectance value.

27.   The system of claim 25, wherein said translator is configured to determine a reflectance value for each of said test pads.

28.   The system of claim 27, wherein said pad typing module is configured to determine a test pad count as a function of said reflectance values and is further configured to determine a test strip format as a function of said test pad count.

29.   The system of claim 25, wherein said translator is configured to determine a reflectance value for each of said test pads and said pad typing module is further configured to determine a test pad order as a function of said reflectance values.

30.   A system for identifying a test product including a test region comprised of one or more test areas, said system comprising:

A.   media having data indicative of a plurality of reference test products, including reference reflectance values and reference wavelengths for each test area, wherein for each reference wavelength there is a set of reference reflectance values;

B.   a set of test signal generators configured to impinge on said test region at least one test signal having a test wavelength;

C.   one or more detectors configured to generate an image of the test region from the reflected signals;

D.   a translator configured to determine a reflectance value from said image for at least one test area;

E.   a typing module configured to compare said reflectance value and the test

wavelength with the reference reflectance values having a reference wavelength substantially equal to the test wavelength to determine a test area type; and

F.   an identification module, configured to identify said test product as a function of a set of test area types determined by said typing module.

31.   The method of claim 30, wherein the test product is a test strip and the test areas are test pads on the test strip.

32.   The method of claim 30, wherein the test product is a reagent cassette and the test areas include one or more of a test line, control line and reference in the test region.

33.   A computer program configured for storage in a memory and for execution by at least one computer processor to identify a test product having a set of test regions, said computer program comprising:

A.   a test signal control module configured for causing a set of light sources to impinge on a set of test regions at least one test signal having a wavelength;

B.   a detector module configured for causing a detector to detect a set of reflected signals from said set of test regions;

C.   an image generating module configured for generating an image comprising a set of reflectance values derived from said set of reflected signals;

D.   a typing module configured for determining a test region type from the image for at least one test region from the set of test regions by comparing a reflectance value associated with the test region with a set of reference reflectance values, wherein each of said reference reflectance values corresponds to said wavelength and is associated with a different reference test region type; and

E.   a test product identification module configured for identifying said test product as a function of a set of determined test region types.

34.   A computer program as in claim 33, wherein the test product is a test strip and the test regions are test pads.